

OSWER SUMMER INTERNS – PROJECT DESCRIPTIONS - 2015

1 – Name of Project: Assessing and Documenting Fireworks and Explosives Open Burning/Open Detonation Monitoring Data and Contamination

2 – Project Description:

Background of Project Area:

Open Burning/Open Detonation (OB/OD) is a common method for treating explosives, including fireworks and propellants. EPA is working to identify the environmental consequences of OB/OD and alternatives. You can be part of that effort!

The Federal, State, and Tribal Programs Branch (FSTPB) provides guidance and support to federal agencies, states, tribes, and EPA regional offices. Within FSTPB the Energetics Wastes Treatment and Disposal Assessment Team (EDAT) provides guidance and support for the safe and protective storage and destructive treatment of “energetic” products including fireworks, flares, propellants, explosives, and munitions. Such products may be declared wastes subject to Resource Conservation and Recovery Act (RCRA) requirements, such as permitting of OB/OD.

The intern will be assigned to the EDAT to identify and inventory OB/OD sites in the U.S., and document water, land, and air contamination based on monitoring data from the open burning and/or open detonation (OB/OD) of energetics. S/he will coordinate with EPA information specialists to obtain a list of permitted OB/OD facilities and their locations, review information in the EDAT files, contact relevant EPA Regional offices and/or State environmental agency offices to obtain information on available site-specific monitoring data, conduct a literature review, and construct and populate a database designed to hold, display and generate reports about these data and information.

Tasks to Be Completed By the Intern:

The project’s objectives are to produce:

- 1) A registry of permitted OB/OD facilities in the United States including Territories.
- 2) A list and summary of literature addressing contamination from OB/OD sites and sites using explosives.
- 3) A registry of methodologies in use by federal and State regulatory agencies to monitor air, soil/land and surface water and ground water contamination during, or as the result of, OB/OD and explosives use events and sites.
- 4) A database displaying contaminant data obtained through soil/land, surface water and ground water, and air monitoring of OB/OD events and sites; listing contaminants and levels found, and extent of contamination.

Tasks include: a) gathering information from RCRAInfo and Superfund (CERCLA) data pulls, and analyzing the data, b) doing an EDAT files and literature review for contamination data from

OB/OD and explosives use sites, c) constructing a simple (i.e. Excel) data base designed to hold, display and generate reports about these data and information, d) contacting federal and/or State authorities with permitting authority over facilities to verify the facility data and document all contaminant monitoring methods and data, e) adding these data to the database, f) producing a paper of five pages or less describing the process s/he used in and results obtained in constructing and populating the database, and g) providing a brief oral presentation on the paper to the Chief, Federal, State, and Tribal Programs Branch and other EPA managers and staff as requested.

3 – What skills are needed for this project:

Analytical skills, simple database (Excel) construction and manipulation, oral/written communication skills, team participation and technical information skills. Knowledge of basic chemistry, environmental science, and engineering is useful but not required.

4 – Is travel or training involved? If yes, please provide specifics.

None (although might do a local field trip).